WHAT IS CLAIMED IS:

1. A method of validating a communication channel, comprising:

measuring energy incident at a frequency in a frequency spectrum corresponding to a channel but not all frequencies in the frequency spectrum; and

determining whether the energy measured at the frequency exceeds a valid channel threshold.

2. The method of validating a communication channel of claim 1, further comprising:

determining a bandwidth utilized by the channel; and

identifying a channel type having a bandwidth approximately equal to the bandwidth utilized by the channel

3. The method of validating a communication channel of claim 2, wherein measuring energy incident at a frequency includes measuring energy at a frequency corresponding to a center of the frequency spectrum;

further comprising measuring energy at a second frequency corresponding to an edge of the frequency spectrum; and

wherein determining a bandwidth utilized by the channel includes doubling the frequency range from the frequency corresponding to the center of the frequency spectrum to the frequency corresponding to the edge of the frequency spectrum.

4. The method of validating a communication channel of claim 2, wherein measuring energy incident at a frequency includes measuring energy at a frequency corresponding to a first edge of the frequency spectrum;

further comprising measuring energy at a second frequency corresponding to a second edge of the frequency spectrum; and

wherein determining a bandwidth utilized by the channel includes determining the frequency range from the frequency corresponding to the first edge of the frequency spectrum to the frequency corresponding to the second edge of the frequency spectrum.

5. The method of validating a communication channel of claim 1, further comprising:

measuring energy incident at a second frequency in the frequency spectrum;

comparing the energy measured at the frequency to the energy measured at the second frequency;

identifying the channel as carrying analog data if the energies measured at the frequency and the second frequency are disparate; and

identifying the channel as carrying digital data if the energies measured at the frequency and the second frequency are not disparate.

6. The method of validating a communication channel of claim 1, wherein the channel is valid if the energy measured at the frequency exceeds the valid channel threshold.

7. The method of validating a communication channel of claim 1, wherein the channel is not valid if the energy measured at the frequency does not exceed the valid channel threshold.

8. A method of finding a frequency range corresponding to a channel in a signal, comprising:

measuring energy existing at two frequencies in a bandwidth of the signal corresponding to a bandwidth occupied by a channel; and

determining whether at least one of the measured energies exceeds a threshold indicating a channel exists.

9. The method of claim 8, further comprising selecting the frequency having the highest measured energy and assuming that a channel is centered near that frequency if at least one of the measured energies exceeds the threshold.

10. The method of claim 9, further comprising searching for additional channels centered at a multiple of the bandwidth occupied by the channel from the frequency having the highest measured energy.

11. A spectrum analyzer, comprising:

a windowing module having a window input to operate on a plurality of samples at a frequency of a communication signal, but fewer than all frequencies in a frequency spectrum corresponding to a channel of the communication signal and a window output at which the windowing module is to place a window signal representative of the plurality of samples;

a Fourier transform module having a Fourier transform input coupled to the window output to determine energy present in the plurality of samples, and having a Fourier transform output at which the Fourier transform module is to place a Fourier transform signal representing positive and negative energy present in the plurality of samples incident thereon;

an absolute value module having an absolute value input coupled to the Fourier transform output, to calculate the absolute value of the energy present in the plurality of samples, and having an absolute value output at which the absolute value module is to place an energy output representing total energy present in the plurality of samples; and

a comparator having an input coupled to the absolute value output to compare the total energy to a valid channel threshold.

12. The spectrum analyzer of claim 11, wherein the Fourier transform module performs a discrete Fourier transform.

13. The spectrum analyzer of claim 11, wherein the comparator is further to compare total energy at two frequencies in the frequency spectrum to determine a type of signal present in the frequency spectrum.

14. The spectrum analyzer of claim 11, wherein the plurality of samples are a portion of a valid channel and the comparator is further to compare total energy at two frequencies in the frequency spectrum to determine whether the channel present at those two frequencies is analog.

15. The spectrum analyzer of claim 11, wherein the plurality of samples are a portion of a valid channel and the comparator is further to

compare total energy at two frequencies in the frequency spectrum to determine whether the channel present at those two frequencies is digital.

16. The spectrum analyzer of claim 11, wherein the plurality of samples are a portion of a valid channel when the total energy is greater than the valid channel threshold.

17. A spectrum analyzer, comprising:

a processor having an input to receive a plurality of samples of a communication signal, but fewer than all frequencies in a frequency spectrum corresponding to a channel of the communication signal, the processor to:

combine the plurality of samples;

determine positive and negative energy present in the plurality of samples;

calculate an absolute value of the positive and negative energy present in the plurality of samples; and

compare the absolute value of the positive and negative energy present in the plurality of samples to a valid channel threshold.

18. The spectrum analyzer of claim 17, wherein the positive and negative energy present in the plurality of samples is determined by use of a Discrete Fourier Transform.

19. The spectrum analyzer of claim 17, wherein the absolute value of the positive and negative energy present in the plurality of samples corresponds to a center of the frequency spectrum, and wherein the processor is further to:

measure energy at a second frequency corresponding to an edge of the frequency spectrum; and

determine a bandwidth utilized by the channel by doubling the frequency range from the frequency corresponding to the center of the frequency spectrum to the frequency corresponding to the edge of the frequency spectrum.

20. The spectrum analyzer of claim 17, wherein the absolute value of the positive and negative energy present in the plurality of samples corresponds to a first edge of the frequency spectrum, and wherein the processor is further to:

measure energy at a second frequency corresponding to a second edge of the frequency spectrum; and

determine a bandwidth utilized by the channel by measuring the frequency range from the frequency corresponding to the first edge of the frequency spectrum to the frequency corresponding to the second edge of the frequency spectrum.

21. The spectrum analyzer of claim 17, wherein the channel is valid when the absolute value of the positive and negative energy present in the plurality of samples exceeds the valid channel threshold.

22. The spectrum analyzer of claim 21, wherein the processor is further to:

measure energy incident at a second frequency in the frequency spectrum;

compare the energy measured at the frequency to the energy measured at the second frequency;

identify the channel as carrying analog data if the energies measured at the frequency and the second frequency are disparate; and

identify the channel as carrying digital data if the energies measured at the frequency and the second frequency are not disparate.

23. A viewing device, comprising:

a communication adaptor coupled to a cable modem to receive a communication signal comprising a plurality of samples therefrom; and

a processor having an input to receive the plurality of samples in a frequency, but fewer than all frequencies of a frequency spectrum corresponding to a channel of the communication signal, the processor to:

combine the plurality of samples;

determine positive and negative energy present in the plurality of samples;

calculate an absolute value of the positive and negative energy present in the plurality of samples corresponding to a total energy of the plurality of samples; and

compare the total energy to a valid channel threshold.

24. The viewing device of claim 23, wherein the positive and negative energy present in the plurality of samples is determined by use of a Discrete Fourier Transform.

25. The viewing device of claim 23, wherein the plurality of samples are a portion of a valid channel when the absolute value of the positive and negative energy present in the plurality of samples is greater than the valid channel threshold.

26. An article of manufacture, comprising:

a computer readable medium having stored thereon instructions which, when executed by a processor, cause the processor to:

receive a plurality of samples of a communication signal, but fewer than all frequencies in a frequency spectrum corresponding to a channel of the communication signal;

combine the plurality of samples in a window;

determine positive and negative energy present in the window;

calculate an absolute value of the positive and negative energy present in the window; and

compare the absolute value of the positive and negative energy present in the window to a valid channel threshold.

27. The article of manufacture of claim 26, wherein the plurality of samples are a portion of a valid channel when the total energy is greater than the valid channel threshold.

28. A demodulator, comprising:

a tuner to receive a communication signal from a cable modem and to provide a plurality of samples of that signal; and

a spectrum analyzer receiving the plurality of samples and to:

combine the plurality of samples;

determine positive and negative energy present in the plurality of samples;

calculate an absolute value of the positive and negative energy present in the plurality of samples corresponding to a total energy of the plurality of samples; and

compare the total energy to a valid channel threshold.

29. The viewing device of claim 28, wherein the plurality of samples are a portion of a valid channel when the absolute value of the positive and negative energy present in the plurality of samples is greater than the valid channel threshold.